

REMARKS/ARGUMENTS

The Examiner is thanked for his continuing attention to this application and indication of allowed claims and allowable claims. However, as to the rejected claims, Applicant respectfully traverses the rejections. The basis for this traversal are discussed below.

Request for Interview

Applicant notes that the Examiner has stated that none of the references “expressly disclose, performing scheduling of *polling to destinations*.” As this is a critical element of the rejected claims, Applicant believes this conclusion should be enough for allowance. Applicant, however, has amended the independent claim in order to further make clear that scheduling of polling to destination is a limitation of the claims. If any of the pending claims are deemed not to be in condition for allowance after consideration of this Response, **a telephone interview with the Examiner is hereby requested**. Please telephone the undersigned at (510) 769-3508 to schedule an interview.

The Status of the Claims.

Claims 1-27 are pending, with claim 14-28 allowed, and claims 7 and 9 indicated allowable if amended to include all limitations of the base claims. The remaining claims stand rejected under 35 U.S.C. 103. in view of Pillar, newly cited reference Parapudi, and Miyoshi.

The Invention

The present invention, in various embodiments, involves a data transfer management system and/or method for scheduling transmission of data units (or cells) to a number of destinations (such as loop port terminations). In specific embodiments, the present invention, rather than scheduling data transfer to destinations, performs a **weighted scheduling of polling to destinations** (see Claim 1) to determine destination availability to accept data and then transmits data to destinations with successful polls.

35 U.S.C. §103(a)

Claims 1-6, 8, 10 and 11 were rejected under 35 U.S.C. §103(a) as allegedly obvious over Pillar et al (6,501,762) in view of Parupudi. Of these, claim 1 is independent.

Pillar et al (6,501,762)

Applicant has previously argued Pillar and incorporated herein by reference all earlier arguments. Pillar discusses scheduling of data from multiple incoming queues to an outgoing datapath (or destination), which it describes as "...a method of scheduling a plurality of data flows within a class of service for digital traffic over a limited bandwidth outgoing datapath." (Col. 3, lines 24-26). **Thus, the scheduling in Pillar is directed to scheduling the sources of data only, in order to determine which of multiple data sources can transmit to an outgoing datapath.**

The present invention, by contrast, is directed to distributing a data source to two or more (e.g., up to 2k) lower bandwidth outgoing destinations by **scheduling the polling of the multiple destinations** rather than the data flow.

Thus, with regard to claim 1, Pillar does not suggest scheduling "data transmission from a source to a plurality of destinations" or "scheduling polling to destinations." Pillar instead discusses what could be considered the opposite, scheduling multiple sources to a single destination by scheduling the dataflow from those multiple sources. Furthermore, Pillar does not discuss scheduling polling at all. Pillar references "polls" or "polling" just four times, and only in the background of the invention (See Col. 2, lines 16, 26, 48, 49) and **does not indicate or suggest that the polling is scheduled.** Therefore, Pillar does not anticipate independent claim 1, as Pillar does not suggest the elements quoted above.

Parupudi (6,859,829)

Applicant thanks the Examiner for issuing a second non-final Office Action in light of the newly cited Parupudi. Parupudi however, like Pillar, **does not indicate or suggest polling is scheduled.**

The Parupudi specification uses the word “poll” or “polling” eight times, each of which are quoted below:

“The service also determines if a destination (IP address or name) is reachable, by periodically polling destinations.”

“Moreover, because many system events such as battery low conditions and network disconnects can happen at any time, some regular calling or polling mechanism is generally needed to detect such conditions. However, such polling consumes resources, which is particularly wasteful since the result is usually unchanged. At the same time, individual polling is redundant. For example, if some system facility (such as an application programming interface, or API) reports the charge of the battery, a word processor, spreadsheet and another application each may be configured to separately and regularly poll the facility to determine the charge.”

“SENS further determines if a destination (IP address or name) is reachable, by periodically polling destinations, preferably via system threadpool timers.”

“FIG. 8 is a representation of a cache for periodically polling network destinations to determine the reachability thereof;”

“FIG. 9 is a representation of a thread pooling arrangement useful for periodically polling network destinations to determine the reachability thereof.”

Parupudi's discussion of polling of destinations is different than what is discussed in the present application. In Parupudi, a client is polled to determine if the client is connected (Parupudi's use of the term "available") and if the SENS can reach the client (Parupudi's term "reachable"). Thus, Parupudi does not use polling to shape or distribute or schedule data transfer at all, but instead polls destinations just to determine if they are still communicating in order to log an event if it has occurred.

In the present invention, a destination is polled to determine it=f the destination has room to accept data and the polling is scheduled as discussed in the claims. Thus, Parupudi does not

suggest or discuss any method for scheduling polling in order to affect data flow, but instead simply uses a periodic poll to determine if a destination is available. The word schedule appears only once in Parupudi, to refer to events such as low battery and not to schedule polling to shape data.

Parupudi's use of polling does not make it obvious to one skilled in the art that Pillar can be applied to polling. Even if one did apply Pillar to Parupudi's polling, Pillar does not suggest scheduling polling, and Pillar also does not suggest scheduling destinations to determine if they are ready to receive data, but instead discusses scheduling sources.

As a further response to the Examiner's grounds for rejection, Applicants note that the Examiner appears to be equating weighted fair queuing of data flows as discussed in Pillar to the weighted scheduling of polling of the claims at issue. Weighted fair queuing is, in Pillar and generally in the art, a method of scheduling the order in which data is transmitted from multiple queues to a destination. Weighted scheduling of polling as used in some aspects of the present invention is a novel method of scheduling polling events to determine availability of outgoing multiple queues in an external device such that the bandwidth required for poll events is minimized. Applicants have examined Pillar col. 3, lines 27-40, cited by the Examiner, and have found no mention of scheduling of polling as stated by the Examiner.

Based on the above remarks, Applicant believes that the rejection of claims in view of Pillar and Parupudi is overcome.

Pillar in light of Miyoshi and Parupudi

Claims 12 and 13 are rejected as obvious over the above references.


As previously stated, the scheduler in Miyoshi schedules output of cells by an output manager. (See Col. 3, lines 52-54, "The generation of RM cells in (1) is performed by an RM cell generator 13, and the output from the generator is managed by an output manager 19 within a scheduler 10.") **Miyoshi does not discuss scheduling polling of destinations. Thus, because none of the references mentions or suggests a element of claim 1, the rejections should be withdrawn.**

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

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Respectfully submitted,



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Attachments:

- 1) A transmittal sheet;
- 2) A receipt indication postcard;